

	L #	Hits	Search Text	DBs	Time Stamp
1	L1	68958	(plasma corona glow adj discharge) same (O2 "O.sub.2" oxygen ozone O3 "O.sub.3" oxidati\$3 oxidiz\$4 air)	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/12/15 09:28
2	L2	196	(427/491).CCLS.	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/12/15 09:23
3	L3	767	(427/536,539).CCLS.	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/12/15 09:23
4	L4	1442	(427/244-246).CCLS.	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/12/15 09:23
5	L5	404	(427/412.3,412.5).CCLS.	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/12/15 09:24

SN09/784,057

	L #	Hits	Search Text	DBs	Time Stamp
6	L6	920	2 or 3	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/12/15 09:24
7	L7	1839	4 or 5	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/12/15 09:25
8	L8	0	4 and 5 and (1 or 3)	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/12/15 09:26
9	L9	48	4 and (1 or 3)	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/12/15 09:28
10	L10	53	5 and (1 or 3)	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/12/15 09:28

	L #	Hits	Search Text	DBs	Time Stamp
11	L11	48415	(plasma corona glow adj discharge)with (O2 "O.sub.2" oxygen ozone O3 "O.sub.3" oxidati\$3 oxidiz\$4 air)	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/12/15 09:28
12	L12	35	4 and (11 or 3)	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/12/15 09:28
13	L13	46	5 and (11 or 3)	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/12/15 09:29
14	L14	11971	(polyolefin polyethylene polypropylene polyvinylchloride PVC polyvinylidenechloride PVDC polyvinylflouride PVF polyvinylideneflouride PVDF polytetrafluoroethylene PTFE terafluoroethylene) and 1	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/12/15 09:34
15	L15	8023	(polyolefin polyethylene polypropylene polyvinylchloride PVC polyvinylidenechloride PVDC polyvinylflouride PVF polyvinylideneflouride PVDF polytetrafluoroethylene PTFE terafluoroethylene) and 11	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/12/15 09:36

	L #	Hits	Search Text	DBs	Time Stamp
16	L16	63	(12 or 13) and 14	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/12/15 09:37
17	L17	20	16 and membrane	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/12/15 09:37
18	L18	20	16 and graft\$4	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/12/15 09:38
19	L19	34	17 or 18	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/12/15 09:38

L20 (42) 15 + (2 or 3) + membrane  
 L21 (68) 15 + (2 or 3) + graft\$4  
 L22 (87) 20 or 21  
 L23 (110) 22 or 19  
 L24 (23) 20 + 21  
 → L25 (4) 24 and 19  
 L26 (53) 24 or 19  
 → L27 (49) 26 not 25

L30 29 + 28 (23)  
 L29 27 + styrene → (23)  
 L28 27 + \$ styrene → (23)  
 ↑ incomplete slow  
 overlaid

25

	Document ID	Issue Date	Title	Current OR	Inventor
1	US 5773098 A	19980630	Applying a fluoropolymer film to a body	427/490	Thomas, Thomas Ronald
2	US 5679264 A	19971021	Gas plasma treated porous medium and method of separation using same	210/767	Gsell, Thomas Charles
3	US 5443743 A	19950822	Gas plasma treated porous medium and method of separation using same	210/767	Gsell, Thomas C.
4	US 5229172 A	19930720	Modification of polymeric surface by graft polymerization	427/536	Cahalan, Patrick T. et al.

(B) Synthetic resins... PE, PP...

(B) The gas used to treat... NO, N<sub>2</sub>O, O<sub>2</sub>, air...  
Ref.

(D) The filter assembly...  
(D) A part of the polymer...

Cl. 16 - membrane

Cent.

(Ab) - graft copolymers on modified polymers

(B) Activated grafting...  
A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z, AA, AB, AC, AD, AE, AF, AG, AH, AI, AJ, AK, AL, AM, AN, AO, AP, AQ, AR, AS, AT, AU, AV, AW, AX, AY, AZ, BA, BB, BC, BD, BE, BF, BG, BH, BI, BJ, BK, BL, BM, BN, BO, BP, BQ, BR, BS, BT, BU, BV, BW, BX, BY, BZ, CA, CB, CC, CD, CE, CF, CG, CH, CI, CJ, CK, CL, CM, CN, CO, CP, CQ, CR, CS, CT, CU, CV, CW, CX, CY, CZ, DA, DB, DC, DD, DE, DF, DG, DH, DI, DJ, DK, DL, DM, DN, DO, DP, DQ, DR, DS, DT, DU, DV, DW, DX, DY, DZ, EA, EB, EC, ED, EE, EF, EG, EH, EI, EJ, EK, EL, EM, EN, EO, EP, EQ, ER, ES, ET, EU, EV, EW, EX, EY, EZ, FA, FB, FC, FD, FE, FF, FG, FH, FI, FJ, FK, FL, FM, FN, FO, FP, FQ, FR, FS, FT, FU, FV, FW, FX, FY, FZ, GA, GB, GC, GD, GE, GF, GG, GH, GI, GJ, GK, GL, GM, GN, GO, GP, GQ, GR, GS, GT, GU, GV, GW, GX, GY, GZ, HA, HB, HC, HD, HE, HF, HG, HH, HI, HJ, HK, HL, HM, HN, HO, HP, HQ, HR, HS, HT, HU, HV, HW, HX, HY, HZ, IA, IB, IC, ID, IE, IF, IG, IH, II, IJ, IK, IL, IM, IN, IO, IP, IQ, IR, IS, IT, IU, IV, IW, IX, IY, IZ, JA, JB, JC, JD, JE, JF, JG, JH, JI, JJ, JK, JL, JM, JN, JO, JP, JQ, JR, JS, JT, JU, JV, JW, JX, JY, JZ, KA, KB, KC, KD, KE, KF, KG, KH, KI, KJ, KK, KL, KM, KN, KO, KP, KQ, KR, KS, KT, KU, KV, KW, KX, KY, KZ, LA, LB, LC, LD, LE, LF, LG, LH, LI, LJ, LK, LL, LM, LN, LO, LP, LQ, LR, LS, LT, LU, LV, LW, LX, LY, LZ, MA, MB, MC, MD, ME, MF, MG, MH, MI, MJ, MK, ML, MM, MN, MO, MP, MQ, MR, MS, MT, MU, MV, MW, MX, MY, MZ, NA, NB, NC, ND, NE, NF, NG, NH, NI, NJ, NK, NL, NM, NN, NO, NP, NQ, NR, NS, NT, NU, NV, NW, NX, NY, NZ, OA, OB, OC, OD, OE, OF, OG, OH, OI, OJ, OK, OL, OM, ON, OO, OP, OQ, OR, OS, OT, OU, OV, OW, OX, OY, OZ, PA, PB, PC, PD, PE, PF, PG, PH, PI, PJ, PK, PL, PM, PN, PO, PP, PQ, PR, PS, PT, PU, PV, PW, PX, PY, PZ, QA, QB, QC, QD, QE, QF, QG, QH, QI, QJ, QK, QL, QM, QN, QO, QP, QQ, QR, QS, QT, QU, QV, QW, QX, QY, QZ, RA, RB, RC, RD, RE, RF, RG, RH, RI, RJ, RK, RL, RM, RN, RO, RP, RQ, RR, RS, RT, RU, RV, RW, RX, RY, RZ, SA, SB, SC, SD, SE, SF, SG, SH, SI, SJ, SK, SL, SM, SN, SO, SP, SQ, SR, SS, ST, SU, SV, SW, SX, SY, SZ, TA, TB, TC, TD, TE, TF, TG, TH, TI, TJ, TK, TL, TM, TN, TO, TP, TQ, TR, TS, TT, TU, TV, TW, TX, TY, TZ, UA, UB, UC, UD, UE, UF, UG, UH, UI, UJ, UK, UL, UM, UN, UO, UP, UQ, UR, US, UT, UY, UZ, VA, VB, VC, VD, VE, VF, VG, VH, VI, VJ, VK, VL, VM, VN, VO, VP, VQ, VR, VS, VT, VU, VV, VW, VX, VY, VZ, WA, WB, WC, WD, WE, WF, WG, WH, WI, WJ, WK, WL, WM, WN, WO, WP, WQ, WR, WS, WT, WU, WV, WW, WX, WY, WZ, XA, XB, XC, XD, XE, XF, XG, XH, XI, XJ, XK, XL, XM, XN, XO, XP, XQ, XR, XS, XT, XU, XV, XW, XX, XY, XZ, YA, YB, YC, YD, YE, YF, YG, YH, YI, YJ, YK, YL, YM, YN, YO, YP, YQ, YR, YS, YT, YU, YV, YW, YX, YY, YZ, ZA, ZB, ZC, ZD, ZE, ZF, ZG, ZH, ZI, ZJ, ZK, ZL, ZM, ZN, ZO, ZP, ZQ, ZR, ZS, ZT, ZU, ZV, ZW, ZX, ZY, ZZ

→ polyolefins, fluoropolymers - not good for active graft

L27

50-50

	Document ID	Issue Date	Title	Current OR	Inventor
L30-1 1	US 200200096 04 A1	20020124 7/25/00	Plasma-deposited coatings, devices and methods	428/450	Zamora, Paul O. et al.
2	US 200100512 77 A1	20011213	Medication device with protein stabilizing surface coating	428/457	Van Antwerp, William Peter et al.
3	US 200100214 21 A1	20010913 8/8/99	Non-cracking hydrophilic polyether sulfone membranes	427/491	Witham, Michael J. et al.
4	US 6465050 B2	20021015	Non-cracking hydrophilic polyether sulfone membranes	427/491	Witham, Michael J. et al.
L30-2 5	US 6436481 B1	20020820	Method of producing a reactive coating by after-glow plasma polymerization	427/488	Chabrecek, Peter et al.

	Document ID	Issue Date	Title	Current OR	Inventor
L30 #3 6	US 6387379 B1	20020514	Biofunctional surface modified ocular implants, surgical instruments, medical devices, prostheses, contact lenses and the like	424/400	Goldberg, Eugene P. et al.
pull L30 #4 7	(A) PolyO+ vinyl poly primer w/ silane groups US 6368677 B2 eff. 4/12/94	20020409	Method of priming polyolefin articles for coating	(B) US Pat. 5,384,192 → poly(hydro Styrene) adhesive primer (B) priming plants → primer 427/534	Hubbard, Michael A. et al.
DIV 8	(B) Thermally stable PO=PF, PP... (B) poly ether... w/ silane groups to improve wettability or corona or chemically oxidized	US 6261679 B1 20010717	Fibrous absorbent material and methods of making the same	428/317.9	Chen, Fung-jou et al.
L30 #5 9	US 6254994 B1	20010703	Method of priming polyolefin articles for coating	428/446	Hubbard, Michael A. et al.
10	US 6203850 B1	20010320	Plasma-annealed porous polymers	427/245	Nomura, Hiroshi
11	US 6169127 B1	20010102	Plasma-induced polymer coatings	523/106	Lohmann, Dieter et al.

	Document ID	Issue Date	Title	Current OR	Inventor
L30 #6 12	(D) Ink-jet pen - had not. → PE, PP, PS US 6123994 A	20000926	Ink-jet recording head and a production method of the same	427/333 cl. 7-10	Ito, Takeshi et al.
13	(D) the surface... activate plasma, O <sub>3</sub> , corona. (D) As plastic after plasma - O <sub>2</sub> , N <sub>2</sub> PVDF, PTFE, PE, PP, PS plastic surface, PE application US 6112908 A	20000905	Membrane laminates and methods for their preparation	210/506	Michaels, Alan Sherman
L30 #7 14	(B) the present inv... membranes, both F & non F. B str. (A) "				



	Document ID	Issue Date	Title	Current OR	Inventor
17	US 5935646 A	19990810	Molecular sieving silica membrane fabrication process	427/244	Raman, Narayan K. et al.
18	US 5893974 A	19990413	Microfabricated capsules for immunological isolation of cell transplants	210/483	Keller, Christopher G. et al.
19	US 5849368 A	19981215	Process for hydrophilicization of hydrophobic polymers	427/536	Hostettler, Fritz et al.
(20)	US 5843789 A	19981201	Method of analysis of genomic biopolymer and porous materials for genomic analyses	436/164	Nomura, Hiroshi et al.

(D) Materials ... PO = PE, PP, PVDH, PVD, PTFE

(D) The glass described ... internal ketyl plasma graft

X plasma purg, then graft

	Document ID	Issue Date	Title	Current OR	Inventor
<p>21</p> <p><i>(L30 #7)</i></p> <p><i>(D) Smith poly - DO. PE, PP... PS... PVE, PTFE</i></p> <p><i>(AD) activated glass</i></p> <p><i>the clay poly of EB</i></p>	US 5804263 A	19980908	Combined plasma and gamma radiation polymerization method for modifying surfaces	428/34.7	Goldberg, Eugene P. et al.
22	US 5770275 A	19980623	Molecular sieving silica membrane fabrication process	427/535	Raman, Narayan K. et al.
23	US 5709909 A	19980120	<p>Filler paste for use in basecoats for coating polyolefin substrate</p> <p>s, basecoats, and process for the direct coating or polyolefin substrate</p>	427/407.1	Leibfarth, Frank et al.

	Document ID	Issue Date	Title	Current OR	Inventor
24	US 5691005 A	19971125	Manufacturing method of a separator for a lithium secondary battery and an organic electrolyte lithium secondary battery using the same separator	427/508	Morigaki, Kenichi et al.
25	US 5662960 A	19970902	Process for producing slippery, tenacious ly adhering hydrogel coatings containing a polyurethane-urea polymer hydrogel commingle d with a poly (n-vinyl pyrrolidone) polymer hydrogel	427/2.3	Hostettler, Fritz et al.

pull

(A) microarray Po  
 (P) A mic... PE membrane  
 26 DA " plasma oxide

(L35 #10)  
 Sub (PO-PP, PE)  
 AS...  
 - Gplasma treated  
 - coat w/ hydrogel  
 poly

	Document ID	Issue Date	Title	Current OR	Inventor	
(L30 #12)	26	US 5576072 A	19961119	Process for producing slippery, tenaciously adhering hydrogel coatings containing a polyurethane-urea polymer hydrogel commingled with at least one other, dissimilar polymer hydrogel	427/532	Hostettler, Fritz et al.
(L30 #12) (D) In apply to common dep. ...	27	US 5523118 A	19960604	Method of coating microporous membranes	427/208.8	Williams, Gregory D.
	28	US 5516561 A	19960514	Applying a fluoropolymer film to a body	427/490	Thomas, Thomas R.
29	US 5514413 A	19960507	Process for producing composite membranes	427/244	Van't Hof, Jacob A. et al.	
(L30 #13)	30	US 5500251 A	19960319	Process for coating low energy surfaces	427/322	Burgoyne, Jr., William F. et al.

	Document ID	Issue Date	Title	Current OR	Inventor
<div>L30 #14</div> <div>31</div>	US 5413660 A	19950509	Method for imparting improved adhesion to polyolefin substrates	156/243	Harvey, Noel G. et al.
<div>L30 #15</div> <div>DIV #2/9</div> <div>32</div>	US 5376400 A SN 003,082 Tent. 602,144	19941227	Combined plasma and gamma radiation polymerization method for modifying surfaces	427/2.24	Goldberg, Eugene P. et al.
33	US 5262097 A	19931116	Methods for attaching fixation members to optics of intraocular lenses	264/1.36	Christ, F. Richard et al.
<div>NO</div> <div>(D) PO - cont w/ PO, the sulfonate ←</div> <div>(D) the starting PO... imul w/plan → hydrophilic groups (-OH) in air, H<sub>2</sub>O, ...</div> <div>34</div>	US 5213722 A	19930525	Method of making a separator material for a storage battery	264/460	Iwasaki, Kazutaka et al.
<div>L30 #16</div> <div>35</div>	US 5171267 A	19921215	Surface-modified self-passivating intraocular lenses	623/6.57	Ratner, Buddy D. et al.

	Document ID	Issue Date	Title	Current OR	Inventor
36	US 5080924 A	19920114	Method of making biocompatible, surface modified materials	427/2.24	Kamel, Ihab et al.
37	US 5069926 A	19911203	Method for modifying the surface of a polymer article	427/491	Iwata, Hiroo et al.
38	US 4980235 A	19901225	Process for preparing non-porous membrane layers	428/421	Scheer, Albert V. D. et al.
39	US 4873037 A	19891010	Method for preparing an asymmetric semi-permeable membrane	264/49	Chau, C. C. et al.
40	US 4828871 A	19890509	Method of providing shaped polymeric articles with improved receptivity to organic coatings	427/533	Strobel, Mark A. et al.

(30 #12)

(B) The present invention relates to a method of modifying the surface of a polymer article by plasma treatment.

(AB) poly-conv. post plasma treatment

(30 #12)

(D) Given the criteria... Method for preparing an asymmetric semi-permeable membrane... PE/SBS...

switching polys... styrene, PO, PE, PP, PS

poor

(30 #12)

(AB) PP... Method of providing shaped polymeric articles with improved receptivity to organic coatings...

	Document ID	Issue Date	Title	Current OR	Inventor
41	US 4692347 A	19870908	Method of interiorly coating tubing	427/491	Yasuda, Hirotsuga K.
42	US 4675213 A	19870623	Hydrophilized membrane of porous hydrophobic material and process for preparing the same	427/244	Yamamori, Hisayoshi et al.
43	US 4663227 A	19870505	Hydrophilized membrane of porous hydrophobic material and process for preparing the same	428/315.7	Yamamori, Hisayoshi et al.
44	US 4576859 A	19860318	Radio wave shielding materials and a method of producing the same	428/311.1 1	Oyachi, Tomio et al.
45	US 4563388 A	19860107	Polyolefin substrate coated with acrylic-type normally tacky and pressure-sensitive adhesive and a method of making same	428/304.4	Bonk, Thomas J. et al.

	Document ID	Issue Date	Title	Current OR	Inventor
<i>L30 #20</i>					
<i>46</i>	US 4429039 A	19840131	Photographic element	430/534	Ochiai, Takeji
<i>L30 #21</i>					
<i>47</i>	US 4424240 A	19840103	Polymers adherent to <u>polyolefins</u>	427/393.5	Kielbania, Jr., Andrew J.
<i>L30 #22</i>					
<i>48</i>	US 4337111 A	19820629	Method of obtaining strong and durable adhesion to rubber through chemical covalent bonds	156/307.5	Kauffman, Karl C. et al.
<i>last</i>					
<i>L30 #23</i>					
<i>49</i>	US 4128426 A	19781205	Process for subbing photographic hydrophobic films	427/536	Ohta, Hideyasu et al.

*Sub PO = PE*

*(D) When a hydrophobic surface is exposed to water*  
*(D) In order to subbing PS*